which we labor, the methods which we follow, and the hopes by which we are inspired.

A most gratifying sign is the eagerness which young men, whose accumulations as yet are but small, have shown in their desire to come to our assistance. Many such persons are among our own former pupils; others are but lookers-on in Baltimore. I am sure that if it were worth while, the amount still lacking could readily be made up by the contributions of those whose love to their young alma mater is as loyal as that of the sons of Harvard, Yale, and Princeton. Here, for example, is the letter of a Baltimore boy, enclosing a modest check for forty dollars, which, although it is marked "private," I venture to read in part: —

"I can never cease to retain the warmest feelings for my alma mater, for I am not only doubly an alumnus of the university, but am also, by birth, a Baltimorean, and of an old Maryland family, and as such am proud that the greatest American university is to be found in my city and State. I beg, therefore, that you will accept the enclosed check. . . . If you think it desirable, I should be happy to have you call on me for a yearly payment of one hundred dollars as long as the university fails to receive an income adequate to meet its expenses. No one is more keenly sensible than I of the extreme paltriness of this sum. I regret that it is all that I can do; but I can say that if others, equally interested, would contribute in proportion to their income, as I have done with mine, the university would never have to fear pecuniary embarrassment."

But it will not be necessary to ask such aid. The mature and prosperous citizens, who know the conditions of municipal advancement, who know the value of a good name, who know that not money alone has lasting value, but that which money brings in education and refinement, the mature and prosperous citizens of Baltimore, who have received two great gifts from men of New England birth, and two great gifts from an Anne Arundel boy, cannot afford to let an institution that has made the fair name of this city familiar to the scholars of every race and every clime, relinquish in a day of temporary embarrassment the prestige which has been acquired by thirteen years of labor.

GROWTH OF THE AMERICAN ECONOMIC ASSOCIATION.

THE American Economic Association has issued a report, by E. W. Bemis, Ph.D., of its branch associations. Eighteen months ago, Mr. Bemis, as secretary of the first economic branch of this association, reported its success, and urged the organization of similar associations elsewhere. That suggestion has been adopted, and now there are six branches, with over one hundred and fifty members, in the following places: Springfield, Mass.; Orange, N. J.; Washington, D.C.; Buffalo, N.Y.; Galesburg, Ill.; Canton, O.

In view of the great possibilities of growth and influence of these economic centres throughout the country, it becomes important to decide upon a plan of organization. These branches are of three types,— that of Springfield, of Galesburg, and that of Buffalo as at present organized.

The Connecticut Valley Economic Association, organized at Springfield in January, 1886, and now numbering about fifty members, has prospered from the first. This association, like others, is allowed to retain one-half of the three dollars dues for local expenses; and this small sum, thanks to the generous help of the able speakers who have come to Springfield, has thus far covered all expenses. A good room, lighted and heated, is given without charge in the High School building. Similar cheap but suitable places for meeting have been secured in public buildings and private offices by the other branches. Meetings have been held once a month save in summer, and many original contributions to economic theory and investigation have been given which have since seen the light in our economic quarterlies and monographs. A large proportion of these has been given by professors of New England and New York colleges, and by others not connected with the local branch, though six or eight members have also made valuable addresses.

Successful as this experiment has been in many ways, three weak points have been developed: first, a difficulty in securing able lecturers whose regular work would admit of a visit to Springfield, — a difficulty less felt in this branch than would be true almost anywhere else, owing to the peculiarly favorable location of Springfield within thirty miles of Amherst and Smith Colleges, and one hundred and thirty miles of Harvard, Yale, Brown, and Columbia, yet a real source of anxiety often to the officers, and one likely to grow from the exhaustion of the field of economic teachers and writers of note within reasonable distance, for it is too much to ask the same person from outside the branch to give his strength often in this missionary work; the second weakness in the Springfield plan lies in the almost inevitable lack of continuity in economic study as long as a different subject is taken up at each meeting; the third difficulty has been the failure of a monthly address, followed by a general discussion, to draw out the resources and greatly stimulate systematic reading in the science of economics on the part of the main body of the members.

That these are sure to prove serious obstacles to success has been proved in Buffalo, where a branch similarly organized a year ago, but cut off by distance from well-known economists, languished, till restored to vigorous life last month in the manner soon to be described.

The branch at Galesburg, Ill., has avoided the difficulties thus far described, but has fallen into one or two others. There the number in the association is limited to twenty-five, elected by the existing members; and no one is allowed to join who does not assume the responsibility of preparing in turn, about once a year, a paper for one of the fortnightly meetings. Further, in order to secure continuity of study, half a dozen or more meetings in succession take up various phases of a single subject, as money, monopolies, the labor question, taxation, etc. By this form of organization much mental development and great interest have been secured; but the limitation of membership and the conditions of admission have kept away a number who would like to join.

The attempt to combine the Springfield and the Galesburg plans has just been made with prospect of success in Buffalo, N.Y., and Canton, O. At Buffalo a reading-circle within the local branch has been formed of all the local members ready to submit to the conditions of admission, which are, attendance, if possible, at every fortnightly meeting, and assumption of the work involved in preparation for the meetings, at which two lines of study are taken up. The first forty-five minutes of each meeting is to be devoted to systematic study of some portion of the general subject assigned for five to eight successive nights: thus, Professor Ely's "Taxation in American States and Cities" is now being studied. Each of the twenty members of the reading-circle reads in advance as much as possible of the chapters assigned for the meeting, and joins in discussion, after two or more members, appointed for the purpose a month previous, and selected in turn from all the members, have given a digest and criticism of the chapters under consideration. The second forty-five minutes is taken up with a review of recent economic articles in twenty-six different American and European magazines, consular reports, and other official publications. One or two of these magazines are chosen for review throughout the year by each member. No constitution for this inner circle has been adopted, but every one who joins does so with a clear understanding of the obligations thereby assumed. The chair is filled each evening by nomination, and the secretary of the general association is secretary of the inner circle. The selection of topics and speakers is in the hands of a topic committee.

This form of organization is too recent to give much ground for forecast; but if the character, ability, and enthusiasm of the members as witnessed by Mr. Bemis the past month be any criterion, excellent results are probable. The Springfield idea of securing for the general membership addresses from outside is adhered to, but no attempt will be made to secure more than four or five such a year.

At Canton, O., about twenty persons, both men and women, as in all the branches, have just formed a branch similar to that as now re-organized at Buffalo, save that in Canton the inner reading-circle, or the active members so called, elect all the officers of the branch from their own number, and admit the associate members to the meetings and discussions, as is not done in Buffalo save on direct invitation of some active member. In Canton the method of work and the conditions of active membership are like those in

Buffalo. In both places local researches in taxation and other economic subjects are also contemplated. The secretary of the Canton branch reports that Professor Ely's "Problems of To-Day" is being studied, and that "the members are enthusiastic."

The branches at Orange, N.J., and Washington, seem to have patterned largely after the Springfield plan.

These suggestions may furnish some help in the solution of the problem of how to extend the work and influence of the association, and form centres of economic study in many parts of our country.

THE WEATHER SERVICE.

THE popular dissatisfaction with the weather predictions as now furnished by the Signal Office has become so great, that a thorough discussion of what is best to be done to improve the service is certainly desirable. Such a discussion has been taking place in the columns of the *Boston Post*, and from that paper we here quote from a recent letter of Mr. H. H. Clayton of the Blue Hill Meteorological Observatory, Readville, Mass. In an editorial note the *Post* seems inclined to doubt the wisdom, if not the truth, of the sweeping assertion of the inefficiency of a large part of the Signal Corps made by Gen. Greely in his recent report to Congress, and it was this which called forth Mr. Clayton's letter in which he takes the following ground.

"Gen. Greely may possibly not be right in his specifications as to exactly what persons are inefficient, but any one who has studied the history of our weather service in comparison with that of foreign countries can scarcely doubt but there is great inefficiency somewhere in our service; and it seems right to allow Gen. Greely every assistance possible to improve the service, until there is proof that his efforts are in the wrong direction. The financial support and the facilities afforded our signal service are the best in the world, and it has been a continuous surprise to the writer that its efficiency has not been greater. The following figures show in round numbers the amount of money appropriated by various governments in Europe and America for the support of their weather services: United States, $900,000; Great Britain, $80,000; Germany, $56,000; Russia, $65,000; Austria, $10,000; Switzerland, $6,000; France, $40,000. This estimate for France does not include the cost of observations made at a few astronomical observatories and mountain stations, which may perhaps increase the total amount expended by France to $60,000. It is thus seen that the amount of money appropriated for its weather service by the United States is ten times greater than that of any country in the world, and is greater than the amount appropriated by all of the governments of Europe combined, including Italy and others not mentioned above.

"In Europe a large part of the observers are voluntary observers, or they are men who are engaged in other pursuits, and for a small compensation take meteorological observations, and telegraph them to the central stations. For this reason it has been necessary to adapt the observations somewhat to the convenience of the observers, and it has been impossible to obtain all over Europe a system of simultaneous observations such as are obtained in the United States. The principal set of observations in the different European countries is taken all the way from 7 A.M. to 9 A.M.; and on account of the difficulty of arranging codes, and transmitting telegrams from one country to another speaking different languages and having different interests, it is almost noon before the morning observations are in an available form in the different countries for use in making weather predictions, while in the United States it is but little more than an hour after the observations are taken before they are available for use at the central office. Again, owing to their small appropriations, none of the European countries have been able to obtain extensive reports more than once a day from surrounding countries, and thus form a set of relatively complete weather maps, such as was previously done three times a day in the United States, and is now done twice a day. The full weather map made by the European weather services is from the morning reports taken between 7 and 9 A.M., though most of the services make supplementary maps from less complete reports received in the afternoon and evening.

"So far, it is seen, then, that our weather service is better equipped, and with far better facilities for effective work, than any service in the world; but what are the results? In 1881 the per cent of verification of their weather predictions estimated by the French meteorological office was 82. Since then it has steadily risen, until, in 1888, a verification of 90 per cent was claimed. In the same manner the per cent of success estimated by the London office for Great Britain has risen from 78 per cent in 1882, to 83 per cent in 1887. In Germany the per cent has risen from about 80 per cent ten or twelve years ago, to 88 per cent in 1887. According to the official verifications of our signal service, the per cent of successful weather predictions rose from about 82 per cent in 1875, to 89 in 1883, and then decreased irregularly to 74 per cent in 1887, or 81 per cent when corrected for the greater interval covered by the predictions. These signal-service verifications for different years are not strictly comparable, because they were verified according to varying rules and with different degrees of care; but the signal service uses them so, and the figures at least agree with the general impression that there has been no increase in the accuracy of the signal-service predictions during the last fifteen years. Neither are the per cents of verification for one country comparable with another, since many of them were verified by different rules; but the results are comparable among themselves, and the steady increase of accuracy claimed for the European weather predictions is no doubt a fact. The able papers and investigations proceeding from the members of the European bureaus seem sufficient evidence that great thought is being given to the improvement of meteorology, and the advance of meteorological knowledge is undoubted.

"The great difficulty with our bureau seems to have been that Congress made it a military rather than a scientific organization. Several years ago a committee appointed to investigate the bureau recommended that it be transferred to a civilian organization, either gradually or suddenly. The National Academy of Science, when consulted on the subject, recommended the same thing; but for some reason unknown to the writer, Congress has neglected or refused to make such a transfer, and last year struck out a clause to that effect in the agricultural bill. There is scarcely any doubt, that, with some scientific investigation, certain of those storms might have been predicted which in recent years have struck our coast unheralded by the signal service, and left wreck and ruin behind, — notably the storm of Jan. 9, 1886, for which no signals were ordered, and in which it is estimated that about 125 vessels were wrecked on the New England coast. Were the weather service of our country in the hands of well-selected scientific men, it would undoubtedly become, as it ought to become with such splendid facilities as it now has, one of the finest meteorological bureaus in the world. If, however, this cannot be, it is hoped that every facility will be furnished Gen. Greely to make it an effective military organization. Gen. Greely's recent books and excellent 'Report of the Lady Franklin Bay Expedition to the Arctic Regions' indicate a deep interest in and a knowledge of the needs of meteorology, and he is no doubt sincere in his efforts to increase the efficiency of the Signal Corps.

"Besides the re-organization of the bureau, an immense advance might be made by organizing local predicting bureaus, where the predicting officers could make a closer study of the conditions surrounding them, and gain more time for prediction, instead of, as now, being compelled rapidly to make predictions for almost the entire length and breadth of our land, which is many times larger than any country of Europe, except Russia. The favor with which the Blue Hill predictions, as well as those of others in this and other parts of the United States, have been received, seems proof that local weather bureaus would be at once appreciated by the public."

MENTAL SCIENCE.

The Genesis of Error.[1]

PROFESSOR S. EXNER of Vienna contributed to the Congress of German Naturalists and Physicians a very suggestive essay upon the principles underlying the origin of illusion in man and the ani-

[1] From the Revue Scientifique, Jan. 12, 1889.